

AMENDMENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently Amended) A mobile device comprising:

a memory;

at least one processor;

an application data store, residing in the memory, to store application data, the application data being associated with an application, also residing in the memory, the application data being persistent when the application is not running; and

a runtime environment program, executing in the at least one processor, to run the application, the application containing presentation information, information for interpreting the stored application data, and information for constructing messages to a server, the runtime environment program using the information in the application to produce a display including data from the stored application data, the runtime environment program interacting with a server to update stored application data in the background when a connection between the mobile device and server is available;

wherein the runtime environment program includes a relay interface, the relay interface knowing a transport protocol used by the mobile device and transmitting messages using the transport protocol;

wherein the runtime environment program sends simplified messages to the server through the relay interface;

wherein the server includes a transport manager-relay interface ~~plugin~~ plug-in, the transport manager-relay interface plugin understanding the transport protocol used by the mobile device and receiving messages transmitted to it using the transport protocol;

wherein the transport manager relay plug-in is one of multiple transport manager relay plug-ins used for different transport protocols, and wherein at least one application at the server uses multiple transport manager relay plug-ins;

wherein the server receives, through the transport manager-relay interface ~~plugin~~ plug-in, and converts the simplified messages into messages of a first markup-language based messaging

protocol for [[the]] a web service and converts messages of the first markup-language based messaging protocol from the web service into simplified messages for the mobile device;

wherein messaging protocol of the simplified messages is less complex than the first markup-language based messaging protocol; and

wherein each simplified message consists of a title and a single block of data in a markup language format.

wherein each simplified message consists of a title and a single block of data in a markup language format.

2. (Withdrawn) The mobile device of claim 1, wherein the application includes templates to construct pages.

3. (Withdrawn) The mobile device of claim 2, wherein the stored application data is used to fill out template to produce displayed pages.

4. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program uses information from application to construct displayed pages.

5. (Previously Presented) The mobile device of claim 1, wherein the mobile device and the sever use asynchronous messaging.

6. (Original) The mobile device of claim 1, wherein messages are stored until a connection between the mobile device and server is available.

7. (Withdrawn) The mobile device of claim 1, wherein the application written in a markup language.

8. (Withdrawn) The mobile device of claim 7, wherein the markup language includes Xscript to access data.

9. (Withdrawn) The mobile device of claim 7, wherein the markup language includes HTML tags for page layout.
10. (Withdrawn) The mobile device of claim 1, including multiple applications each with a data store in the memory.
11. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program can search for additional applications.
12. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program interacts with an application registry on a server to get additional applications
13. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program provides authentication information before downloading an additional application.
14. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program can download additional applications.
15. (Original) The mobile device of claim 1, wherein the application receives data from web service.
16. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program sends simplified messages to the server.
17. (Withdrawn) The mobile device of claim 16, wherein the server converts the simplified messages to SOAP messages for the web service and converts SOAP messages from the web service into simplified messages for the mobile device.
18. (Withdrawn) The mobile device of claim 17, wherein each simplified message includes a title and a single XML field.

19. (Previously Presented) The mobile device of claim 1, wherein the block of data in the simplified message contains a fragment of a file in the markup language format.
20. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program abstracts details of the mobile device from the application.
21. (Withdrawn) The mobile device of claim 20, wherein the application data is XML data.
22. (Withdrawn) The mobile device of claim 1, wherein the runtime environment program is a cage.
23. (Withdrawn) The mobile device of claim 1 wherein the application is an airlet.
24. (Currently Amended) A method comprising:
- storing application data on a mobile device, the application data being associated with an application, the application data being persistent when the application is not running;
 - using a runtime environment program to execute the application on the mobile device, the application containing presentation information, information for interpreting the stored application data, and information for constructing messages to a server, the runtime environment program using the information in the application to produce a display including data from the stored application data; and
 - in the background, using the runtime environment program to interact with a server to update stored application data when a connection between the mobile device and server is available;
 - wherein the runtime environment program includes a relay interface, the relay interface knowing a transport protocol used by the mobile device and transmitting messages using the transport protocol;
 - wherein the runtime environment program sends simplified messages to the server through the relay interface;

wherein the server includes a transport manager-relay interface ~~plugin~~ plug-in, the transport manager-relay interface plugin understanding the transport protocol used by the mobile device and receiving messages transmitted to it using the transport protocol;

wherein the transport manager relay plug-in is one of multiple transport manager relay plug-ins used for different transport protocols, and wherein at least one application at the server uses multiple transport manager relay plug-ins;

wherein the server receives, through the transport manager-relay interface ~~plugin~~ plug-in, and converts the simplified messages into messages of a first markup-language based messaging protocol for the web service and converts messages of the first markup-language based messaging protocol from ~~[[the]]~~ a web service into simplified messages for the mobile device;

wherein messaging protocol of the simplified messages is less complex than the first markup-language based messaging protocol; and

wherein each simplified message consists of a title and a single block of data in a markup language format.

25. (Withdrawn) The method of claim 24, wherein the application includes templates to construct pages.

26. (Withdrawn) The method of claim 25, wherein the stored application data is used to fill out template to produce displayed pages.

27. (Withdrawn) The method of claim 24, wherein the runtime environment program uses information from application to construct displayed pages.

28. (Previously Presented) The method of claim 24, wherein the mobile device and the sever use asynchronous messaging.

29. (Original) The method of claim 24, wherein messages are stored until a connection between the mobile device and server is available.

30. (Withdrawn) The method of claim 24, wherein the application written in a markup language.

31. (Withdrawn) The method of claim 30, wherein the markup language includes Xscript to access data.
32. (Withdrawn) The method of claim 30, wherein the markup language includes HTML tags for page layout.
33. (Withdrawn) The method of claim 24, including multiple applications each with a data store in the memory.
34. (Withdrawn) The method of claim 1, wherein the runtime environment program can search for additional applications.
35. (Withdrawn) The method of claim 24, wherein the runtime environment program interacts with an application registry on a server to get additional applications.
36. (Withdrawn) The method of claim 24, wherein the runtime environment program provides authentication information before downloading an additional application.
37. (Withdrawn) The method of claim 24, wherein the runtime environment program can download additional applications.
38. (Original) The method of claim 24, wherein the application receives data from web service.
39. (Withdrawn) The method of claim 24, wherein the runtime environment program sends simplified messages to the server.
40. (Withdrawn) The method of claim 24, wherein the server converts the simplified messages to SOAP messages for the web service and converts SOAP messages from the web service into simplified messages for the mobile device.

41. (Withdrawn) The method of claim 40, wherein each simplified message includes a title and a single XML field.

42. (Previously Presented) The method of claim 24, wherein the block of data in the simplified message contains a fragment of a file in the markup language format.

43. (Withdrawn) The method of claim 24, wherein the runtime environment program abstracts details of the mobile device from the application.

44. (Withdrawn) The method of claim 43, wherein the application data is XML data.

45. (Withdrawn) The method of claim 24, wherein the runtime environment program is a cage.

46. (Withdrawn) The method of claim 24 wherein the application is an airlet.

47. (Currently Amended) A computer readable media comprising a runtime environment program and an application to instruct a mobile device to do the steps of:

storing application data on a mobile device, the application data being associated with the application, the application data being persistent when the application is not running;
using the runtime environment program to execute the application on the mobile device, the application containing presentation information, information for interpreting the stored application data, and information for constructing messages to a server, the runtime environment program using the information in the application to produce a display including data from the stored application data; and

in the background, using the runtime environment program to interact with a server to update stored application data when a connection between the mobile device and server is available;

wherein the runtime environment program includes a relay interface, the relay interface knowing a transport protocol used by the mobile device and transmitting messages using the transport protocol;

wherein the runtime environment program sends simplified messages to the server through the relay interface;

wherein the server includes a transport manager-relay interface ~~plugin~~ plug-in, the transport manager-relay interface plugin understanding the transport protocol used by the mobile device and receiving messages transmitted to it using the transport protocol;

wherein the transport manager relay plug-in is one of multiple transport manager relay plug-ins used for different transport protocols, and wherein at least one application at the server uses multiple transport manager relay plug-ins;

wherein the server receives, through the transport manager-relay interface ~~plugin~~ plug-in, and converts the simplified messages into messages of a first markup-language based messaging protocol for the web service and converts messages of the first markup-language based messaging protocol from ~~[[the]]~~ a web service into simplified messages for the mobile device;

wherein messaging protocol of the simplified messages is less complex than the first markup-language based messaging protocol; and

wherein each simplified message consists of a title and a single block of data in a markup language format.

48. (Withdrawn) The computer readable media of claim 47, wherein the application includes templates to construct pages.

49. (Withdrawn) The computer readable media of claim 48, wherein the stored application data is used to fill out template to produce displayed pages.

50. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program uses information from application to construct displayed pages.

51.(Previously Presented) The computer readable media of claim 47, wherein the mobile device and the sever use asynchronous messaging.

52. (Original) The computer readable media of claim 47, wherein messages are stored until a connection between the mobile device and server is available.

53. (Withdrawn) The computer readable media of claim 47, wherein the application written in a markup language.

54. (Withdrawn) The computer readable media of claim 53, wherein the markup language includes Xscript to access data.

55. (Withdrawn) The computer readable media of claim 53, wherein the markup language includes HTML tags for page layout.

56. (Withdrawn) The computer readable media of claim 47, including multiple applications each with a data store in the memory.

57. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program can search for additional applications.

58. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program interacts with an application registry on a server to get additional applications.

59. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program provides authentication information before downloading an additional application.

60. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program can download additional applications.

61. (Original) The computer readable media of claim 47, wherein the application receives data from web service.

62. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program sends simplified messages to the server.

63. (Withdrawn) The computer readable media of claim 62, wherein the server converts the simplified messages to SOAP messages for the web service and converts SOAP messages from the web service into simplified messages for the mobile device.

64. (Withdrawn) The computer readable media of claim 63, wherein each simplified message includes a title and a single XML field.

65. (Previously Presented) The computer readable media of claim 47, wherein the block of data in the simplified message contains a fragment of a file in the markup language format.

66. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program abstracts details of the mobile device from the application.

67. (Withdrawn) The computer readable media of claim 66, wherein the application data is XML data.

68. (Withdrawn) The computer readable media of claim 47, wherein the runtime environment program is a cage.

69. (Withdrawn) The computer readable media of claim 47 wherein the application is an airlet.

70. (Currently Amended) A mobile device comprising:

- a memory;

- at least one processor;

- an application data store, residing in the memory, to store application data, the application data being associated with an application, also residing in the memory, the application data being persistent when the application is not running; and

- a runtime environment program, executing in the at least one processor, to run the application, the application containing presentation information, information for interpreting the stored application data, and information for constructing messages to a server, the runtime environment program using the information in the application to produce a display including

data from the stored application data, the runtime environment program interacting with a server to update stored application data in the background when a connection between the mobile device and server is available;

wherein the runtime environment program sends simplified messages to the server;

wherein the server converts the simplified messages into messages of a first markup-language based messaging protocol for [[the]] a web service and converts messages of the first markup-language based messaging protocol from the web service into simplified messages for the mobile device;

wherein the transport manager relay plug-in is one of multiple transport manager relay plug-ins used for different transport protocols, and wherein at least one application at the server uses multiple transport manager relay plug-ins;

wherein messaging protocol of the simplified messages is less complex than the first markup-language based messaging protocol; and

wherein each simplified message consists of a title and a single block of data in a markup language format.